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In the Subject Index, pages 3168–3180, each technical paper is listed under a maximum of three appropriate headings. Note the locating number in boldface type preceding each paper title, and use that number to find the paper in the Chronological Index. The Author Index, pages 3181–3184, lists all authors associated with a given technical paper. The locating numbers are identical to those in the Subject Index. The Chronological Index, pages 3185–3197, also lists all papers by their locating numbers. This listing contains titles, authors and their affiliations, and volume, issue number, and page where the paper appeared. It also gives the AIAA paper number, if any, on which the article was based. The Book Review index is listed on page 3197. Comments, Replies, and Errata are listed directly beneath the paper to which they refer. If the paper to which they refer was published prior to 2006, that paper also will appear in both the Subject and Chronological Indexes. Authors of Comments also are listed in the Author Index.

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**J06-214** Extension of the Incompressible n = 2 Vortex into Compressible
**J06-135** Large-Eddy Simulation of a Wing Tip Vortex on Overset Grids
**J06-142** Scaling Properties and Wave Interactions in Confined Supersonic Turbulent Bluff-Body Wakes
**J06-106** Analysis of Delta-Wing Vortical Substructures Using Detached-Eddy Simulation
**J06-316** Identification and Control of Three-Dimensional Separation on Low Swept Delta Wing
**J06-333** Compressible Vortex-Ring Interaction Studies with a Number of Generic Body Configurations
**J06-116** Flow Around a Rotatable Square Cylinder-Plate Body
**J06-110** Structure of Three-Dimensional Separated Flow on an Axisymmetric Bump
**J06-247** Exact Solution of the Bidirectional Vortex
**J06-056** Control of Flow Structure on Delta Wing with Steady Trailing-Edge Blow
**J06-088** Formation of Secondary Vortices in Turbulent Square-Duct Flow
**J06-055** Wake Control Based on Spanwise Sinusoidal Perturbations

## GUIDANCE, CONTROL, AND DYNAMICS TECHNOLOGY

### *Control System Design*

**J06-094** Effective Development of Reconfigurable Systems Using Linear State-Feedback Control

### *Control Theory*

**J06-143** New Methods for Finite Element Model Updating Problems
**J06-193** Computational Study of Shock Mitigation and Drag Reduction by Pulsed Energy Lines

### *Dynamics*

**J06-144** Elastodynamic Analysis of Aerial Refueling Hose Using Curved Beam Element
**J06-283** Cracking-Induced Mistuning in Bladed Disks

### *Optimization Techniques*

**J06-338** Effect of Various Approximations of the Discrete Adjoint on Gradient-Based Optimization
**J06-305** Computational Fluid Dynamics Driven Optimization of Blended Wing Body Aircraft
**J06-351** Parallel Simulated Annealing Using Simplex Method
**J06-223** General Implementation of Multilevel Parallelization in a Gradient-Based Design Optimization Algorithm
**J06-327** Extensive Experiments on Genetic Algorithms for the Optimization of Piezoelectric Actuator Locations

### *Signal Processing*

**J06-085** Hilbert–Huang Transform Stability Spectral Analysis Applied to Flutter Flight Test Data

### *Structural Control*

**J06-129** Adaptive Control of Nonlinear Free Vibrations of Composite Plates Using Piezoelectric Actuators
**J06-313** Similarities Between Variable Stiffness Springs and Piezoceramic Switching Shunts

### *System Identification*

**J06-258** Stochastic Nonparametric Models of Uncertain Hysteretic Oscillators
**J06-129** Adaptive Control of Nonlinear Free Vibrations of Composite Plates Using Piezoelectric Actuators
**J06-211** Reduced Order Nonlinear System Identification Methodology

### *UAVs*

**J06-289** Atmospheric Winds and Their Implications for Microair Vehicles

# INTERDISCIPLINARY TOPICS

### *Analytical and Numerical Methods*

**J06-158** Parallel Implementation of Structural Dynamic Analysis for Parachute Simulation
**J06-335** Sensitivity Analysis and Optimal Design of Smart Peizolaminated Composite Beams
**J06-297** Topology Optimization for an Evolutionary Design of a Thermal Protection System
**J06-090** Efficient Construction of Discrete Adjoint Operators on Unstructured Grids Using Complex Variables
**J06-123** Efficient Shape Optimization Under Uncertainty Using Polynomial Chaos Expansions and Local Sensitivities
**J06-175** Stability Analysis of Stitched Composite Plate System with Delamination Under Hygrothermal Pressure
**J06-235** Effects of Bridging on Buckling of Trilayer Beams with Separated Delaminations
**J06-285** Generalized Approach for Incorporating Normalization Conditions in Design Sensitivity Analysis of Eigenvectors
**J06-324** Flux Corrected Finite Volume Scheme for Preserving Scalar Boundedness in Reacting Large-Eddy Simulations
**J06-225** Scattering of Sound by Liner Splices: A Kirchhoff Model with Numerical Verification
**J06-282** Multiple Crack Analysis in Finite Plates
**J06-250** Heterogeneous Domain Decomposition for Computational Aeroacoustics
**J06-246** Lagrangian Coordination for Enhancing the Convergence of Analytical Target Cascading
**J06-145** Fast Meshless Reanalysis Using Combined Approximations, Preconditioned Conjugate Gradient, and Taylor Series
**J06-144** Elastodynamic Analysis of Aerial Refueling Hose Using Curved Beam Element
**J06-139** Mesh Generation Using Unstructured Computational Meshes and Elliptic Partial Differential Equation Smoothing
**J06-263** Model Predictive Capability Assessment Under Uncertainty
**J06-247** Exact Solution of the Bidirectional Vortex
**J06-031** Application of Probabilistic Fracture Mechanics to Prognosis of Aircraft Engine Components
**J06-183** Neural Networks for Inverse Problems Using Principal Component Analysis and Orthogonal Arrays
**J06-064** Application of p-Multigrid to Discontinuous Galerkin Formulations of the Poisson Equation
**J06-071** Proper Estimation of Random Uncertainties in Steady-State Testing
**J06-134** Improving the Predictive Capability of Turbulence Models Using Evidence Theory

### *CAD/CAM*

**J06-028** Supervised Learning Approach to Parametric Computer-Aided Design Geometry Repair

### *Lasers and Laser Applications*

**J06-178** Role of $O_2(b)$ and $I_2$ ($A'$, $A$) in Chemical Oxygen–Iodine Laser Dissociation Process
**J06-157** Inverse Evaluation of Material Constants for Piezoceramics by Out-of-Plane Vibration
**J06-013** Pulsed-Laser-Induced Vibration of Pressurized Thin Walled Cylinder
**J06-044** Characterization of Schlieren Light Source Using Laser -Induced Optical Breakdown in Argon

### *Multidisciplinary Design Optimization*

**J06-311** Aerodynamic Optimization Under a Range of Operating Conditions
**J06-243** Airfoil Shape Optimization Using a Nonuniform Rational B-Splines Parametrization Under Thickness Constraint
**J06-348** Design of Postbuckled Spinal Structures for Airfoil Camber and Shape Control
**J06-305** Computational Fluid Dynamics Driven Optimization of Blended Wing Body Aircraft
**J06-111** Shape Optimization for Delay of Laminar–Turbulent Transition
**J06-173** Design of a Morphing Airfoil Using Aerodynamic Shape Optimization
**J06-204** Combined Direct/Adjoint Reduced-Order Approximations for Design-Oriented Structural-Acoustics
**J06-285** Generalized Approach for Incorporating Normalization Conditions in Design Sensitivity Analysis of Eigenvectors
**J06-118** New Approach for System Reliability-Based Design Optimization
**J06-095** Statistical Improvement Criteria for Use in Multiobjective Design Optimization
**J06-230** Airfoil Shape Design and Optimization Using Multifidelity Analysis and Embedded Inverse Design
**J06-246** Lagrangian Coordination for Enhancing the Convergence of Analytical Target Cascading
**J06-259** Design and Analysis of "Noisy" Computer Experiments
**J06-299** Inverse Possibility Analysis Method for Possibility-Based Design Optimization
**J06-328** Optimized Design of Piezoelectric Flap Actuators for Active Flow Control
**J06-004** Multigrid Solution of the Discrete Adjoint for Optimization Problems on Unstructured Meshes
**J06-170** New Decoupled Framework For Reliability-Based Design Optimization
**J06-060** Identifying Interfaces in Engineering Systems
**J06-304** Stacking Sequence Design of Flat Composite Panel for Flutter and Thermal Buckling
**J06-007** Target Exploration for Disconnected Feasible Regions in Enterprise-Driven Multilevel Product Design
**J06-039** Reliability-Based Design Optimization of a Transonic Compressor
**J06-094** Effective Development of Reconfigurable Systems Using Linear State-Feedback Control

### *Reliability, Maintainability, and Logistics Support*

**J06-299** Inverse Possibility Analysis Method for Possibility-Based Design Optimization
**J06-031** Application of Probabilistic Fracture Mechanics to Prognosis of Aircraft Engine Components
**J06-118** New Approach for System Reliability-Based Design Optimization

### *Research Facilities and Instrumentation*

**J06-137** Skin Friction Measurements on the NASA Hump Model
**J06-072** Effect of Quenching Kinetics on Unsteady Response of Pressure-Sensitive Paint
**J06-071** Proper Estimation of Random Uncertainties in Steady-State Testing

### *Safety*

**J06-040** Increasing Allowable Flight Loads by Improved Structural Modeling

### *Sensor Systems*

**J06-183** Neural Networks for Inverse Problems Using Principal Component Analysis and Orthogonal Arrays
**J06-314** Detection of Corrosion Using Piezoelectric Impedance-Based Structural Health Monitoring

# LAUNCH VEHICLE AND MISSILE (LV/M) TECHNOLOGY

### *Propulsion and Propellant Systems*

**J06-140** Structure of Underexpanded Jets from Square Nozzles

### *Simulation*

**J06-258** Stochastic Nonparametric Models of Uncertain Hysteretic Oscillators

### *Structural Design (Including Loads)*

**J06-213** Tension Buckling in Shear-Flexible Composite Beams

### *Testing, Flight and Ground*

**J06-071** Proper Estimation of Random Uncertainties in Steady-State Testing
**J06-262** Flight Data Analysis of the HyShot 2 Scramjet Flight Experiment

### *Vibration*

**J06-013** Pulsed-Laser-Induced Vibration of Pressurized Thin Walled Cylinder

# PROPULSION

## *Advanced Space Propulsion*

**J06-014** Air Pressure Effect on Propulsion with Transversly Excited Atmospheric $CO_2$ Laser

## *Airbreathing Propulsion*

**J06-103** Mass Flow Boundary Conditions for Subsonic Inflow and Outflow Boundary
**J06-350** Hybrid Reynolds-Averaged Navier-Stokes/Large Eddy Simulation Approach for Predicting Jet Noise
**J06-039** Reliability-Based Design Optimization of a Transonic Compressor
**J06-038** Detonation in Mixtures of JP-10 Vapor and Air
**J06-015** Combustion Enhancement via Stabilized Piecewise Nonequilibrium Gliding Arc Plasma Discharge

## *Combustion and Combustor Designs*

**J06-052** Linear Stochastic Estimation of a Swirling Jet
**J06-080** Subgrid Modeling for Simulation of Spray Combustion in Large-Scale Combustors
**J06-163** Laser Ignition and Combustion Properties of Composite Propellant Containing Nanometal Powders
**J06-015** Combustion Enhancement via Stabilized Piecewise Nonequilibrium Gliding Arc Plasma Discharge

## *Combustion Instability*

**J06-062** Control of High-Frequency Thermoacoustic Pulsations by Distributed Vortex Generators
**J06-081** Systematic Analysis of Lean-Premixed Swirl-Stabilized Combustion
**J06-051** Boundary Conditions Effects on Nonreacting and Reacting Flows in a Multiswirl Combustor
**J06-082** Large-Eddy Simulation and Acoustic Analysis of a Swirled Staged Turbulent Combustor

## *Detonation*

**J06-037** Numerical Study of Detonation Stabilization by Finite Length Wedges
**J06-038** Detonation in Mixtures of JP-10 Vapor and Air
**J06-035** Exact Solution for Multidimensional Compressible Reactive Flow for Verifying Numerical Algorithms

## *Droplet and Spray Characterization*

**J06-252** Optical Observation for the Impingements of Nitrogen Tetroxide/Monomethylhydrazine Simulants
**J06-073** Spray Characteristics of Angled Liquid Injection into Subsonic Crossflows

## *Electric Propulsion*

**J06-012** Magnetohydrodynamic Power Generation Using Externally Ionized, Cold, Supersonic Air as Working Fluid

## *Emissions and Noises*

**J06-345** Fan Flow Deflection in Simulated Turbofan Exhaust
**J06-254** Scaling Laws and a Method for Identifying Components of Jet Noise
**J06-047** Effects of Aerodynamic Tabs on Screech Reduction of a Supersonic Jet
**J06-009** Fine-Scale Turbulence Noise from Dual-Stream Jets

## *Engine Cooling and Heat Transfer*

**J06-337** Analysis of $k$–$\varepsilon$ Budgets for Film Cooling Using Direct Numerical Simulation

## *Gas Turbine Engines*

**J06-117** Unsteady Periodic Behavior of a Disturbed Tip-Leakage Flow
**J06-206** Modeling of Wake-Induced Transition in Linear Low-Pressure Turbine Cascades
**J06-283** Cracking-Induced Mistuning in Bladed Disks
**J06-005** Plasma Actuators for Separation Control of Low-Pressure Turbine Blades
**J06-059** Adaptive Optimal Sampling Methodology for Reliability Prediction of Series Systems
**J06-114** Stabilizing Linear Harmonic Flow Solvers for Turbomachinery Aeroelasicity with Complex Interative Algorithms
**J06-081** Systematic Analysis of Lean-Premixed Swirl-Stabilized Combustion
**J06-165** Unsteady Plasma Actuators for Separation Control of Low-Pressure Turbine Blades
**J06-080** Subgrid Modeling for Simulation of Spray Combustion in Large-Scale Combustors
**J06-049** Toward Validation of Large Eddy Simulation for Turbulent Combustion
**J06-077** Large-Eddy Simulations as a Design Tool for Gas Turbine Combustion Systems

## *Hypersonic Propulsion*

**J06-241** Hypervelocity Fuel/Air Mixing in Mixed-Compression Inlets of Shcramjets
**J06-271** Penetration of Gaseous Jets in Supersonic Flows

## *Ignition*

**J06-163** Laser Ignition and Combustion Properties of Composite Propellant Containing Nanometal Powders

## *Laser Integration/Systems*

**J06-014** Air Pressure Effect on Propulsion with Transversly Excited Atmospheric $CO_2$ Laser

## *Liquid Rocket Engines*

**J06-065** Numerical Study of Restricted Shock Separation in a Compressed Truncated Perfect Nozzle
**J06-247** Exact Solution of the Bidirectional Vortex
**J06-252** Optical Observation for the Impingements of Nitrogen Tetroxide/Monomethylhydrazine Simulants

## *Micro Propulsion and Power*

**J06-034** Flame Acceleration in Narrow Channels: Applications for Micropropulsion in Low-Gravity Environments

## *Ramjets and Scramjets*

**J06-262** Flight Data Analysis of the HyShot 2 Scramjet Flight Experiment
**J06-271** Penetration of Gaseous Jets in Supersonic Flows
**J06-066** Supersonic Coaxial Jet Experiment for Computational Fluid Dynamics Code Validation
**J06-029** Transverse Supersonic Controlled Swirling Jet in a Supersonic Cross Stream
**J06-015** Combustion Enhancement via Stabilized Piecewise Nonequilibrium Gliding Arc Plasma Discharge

## *Solid Rocket Motors*

**J06-089** Internal Flow Temperature and Vorticity Dynamics Due to Transient Mass Addition

## *Supersonic Combustion*

**J06-037** Numerical Study of Detonation Stabilization by Finite Length Wedges
**J06-271** Penetration of Gaseous Jets in Supersonic Flows

## *Turbomachinery*

**J06-240** Fast Estimation of Unsteady Flows in Turbomachinery at Multiple Interblade Phase Angles
**J06-291** Flutter Analysis of Contra-Rotating Blade Rows
**J06-131** Numerical Simulations of Fan Interaction Noise Using a Hybrid Approach
**J06-117** Unsteady Periodic Behavior of a Disturbed Tip-Leakage Flow

# REAL-TIME SYSTEMS

## *Sensor Systems*

**J06-264** Temperature Measurements Using a Microoptical Sensor Based on Whispering Gallery Modes

## *Systems Engineering*

**J06-060** Identifying Interfaces in Engineering Systems

# SPACE TECHNOLOGY

## *Space Experiments*

**J06-115** Particle Response to Low-Reynolds-Number Oscillation of a Fluid in Microgravity

## *Space Processing*

**J06-093** Study of Wetting in an Asymmetrical Vane-Wall Gap in Propellant Tanks

## *Spacecraft Power*

**J06-255** Parameter Optimization of the Dynamic Behavior of Inhomogeneous Multifunctional Power Structures

### *Spacecraft Structural Configuration, Design, and Analysis*

**J06-253** Flutter Characteristics of Reentry Space Vehicle with Nonplanar Wings
**J06-016** Experimental Investigation of Tape Springs Folded in Three Dimensions
**J06-255** Parameter Optimization of the Dynamic Behavior of Inhomogeneous Multifunctional Power Structures

### *Spacecraft Thermal Management*

**J06-087** Multiobjective Evolutionary Structural Optimization Using Combined Static/Dynamic Control Parameters

## STRUCTURAL MECHANICS AND MATERIALS

### *Aeroelasticity and Control*

**J06-161** Novel Approach to Self-Sensing Actuation for Semi-Active Vibration Suppression
**J06-216** Stochastic Dynamics of a Nonlinear Aeroelastic System
**J06-281** Tiltrotor Whirl Flutter Alleviation Using Actively Controlled Wing Flaperons
**J06-048** Behavior of Piezoelectric Transducer on Energy-Recycling Semiactive Vibration Suppression
**J06-096** Feedback Control and Optimization for Rotating Disk Flutter Suppression with Actuator Patches
**J06-041** Aeroelastic Response of Composite Aircraft Swept Wings Impacted by a Laser Beam

### *Dynamic Model Analysis*

**J06-200** Calculation of Eigensolution Derivatives for Nonviscously Damped Systems
**J06-267** Free Vibration of Transversely Isotropic Circular Plates
**J06-158** Parallel Implementation of Structural Dynamic Analysis for Parachute Simulation
**J06-161** Novel Approach to Self-Sensing Actuation for Semi-Active Vibration Suppression
**J06-238** Efficient Modal Frequency Response Analysis of Large Structures with Structural Damping
**J06-013** Pulsed-Laser-Induced Vibration of Pressurized Thin Walled Cylinder
**J06-224** Nonlinear Damped Vibrations of a Laminated Composite Plate Subjected to Blast Load
**J06-160** Stability in a Twisted Periodic Blade System with Cracks
**J06-197** Nonlinear Reduced Order Random Response Analysis of Structures with Shallow Curvature
**J06-146** Interative Computation of Modal Sensitivities
**J06-332** Complex Variable Method for Eigensolution Sensitivity Analysis
**J06-229** An Investigation over CFD–Based Models for the Identification of Nonlinear Unsteady Aerodynamics Responses

### *Flexible and Active Structures*

**J06-348** Design of Postbuckled Spinal Structures for Airfoil Camber and Shape Control
**J06-335** Sensitivity Analysis and Optimal Design of Smart Peizolaminated Composite Beams
**J06-017** Electromechanically Coupled Zigzag Third-Order Theory for Thermally Loaded Hybrid Piezoelectric Plates
**J06-174** Semi-Active Vibration Control of Adaptive Structures Using Magnetorheological Dampers
**J06-167** Three-Dimensional Analysis of Wrinkled Membranes Using Modification Scheme of Stress-Strain Tensor
**J06-156** Analysis of Edge Effect in Large Deflections of Rotationally Symmetric Membrane Caps
**J06-280** Thin-Shell Deployable Reflectors with Collapsible Stiffeners Part 1: Approach
**J06-228** Nonlinear Response of Highly Flexible Structures to Air Blast Loads: Application Shelters
**J06-061** Modeling and Application of Eddy Current Damper for Suppression of Membrane Vibrations
**J06-094** Effective Development of Reconfigurable Systems Using Linear State-Feedback Control
**J06-309** Numerical Analysis of Heaving Flexible Airfoils in a Viscous Flow

### *Materials Structural Properties*

**J06-344** Low Velocity Impact Response of Small-Angle Laminated Composites
**J06-157** Inverse Evaluation of Material Constants for Piezoceramics by Out-of-Plane Vibration
**J06-221** Parametric Two-Dimensional Finite Element Investigation: Shot Peening of High-Strength Steel
**J06-282** Multiple Crack Analysis in Finite Plates
**J06-043** Fatigue Crack Growth Prediction Under Spectrum Load Using Crack Driving Force Delta K
**J06-147** Crushing of a Textile Core Sandwich Panel
**J06-151** Torsion of a Functionally Graded Cylinder

### *Structural Composite Materials*

**J06-329** Thermomechanical Stability of Imperfect Functionally Graded Plates Based on the Third Order Theory
**J06-284** Multiple Delamination Detection of a Composite Beam Using Magnetostrictive Patch
**J06-237** Crack Tip Fields in Functionally Graded Materials with Temperature-Dependent Properties
**J06-344** Low Velocity Impact Response of Small-Angle Laminated Composites
**J06-244** Shear Buckling of Flat Orhotropic Stiffened Panels with Application to Glare Material
**J06-076** Static Analysis of Symmetric Angle-Ply Laminated Plates by Analytical Method
**J06-188** Approximate Spectral Element for Wave Propagation Analysis in Inhomogenous Layered Media
**J06-213** Tension Buckling in Shear-Flexible Composite Beams
**J06-286** Bilevel Optimization and Postbuckling of Highly Strained Composite Stiffened Panels
**J06-235** Effects of Bridging on Buckling of Trilayer Beams with Separated Delaminations
**J06-224** Nonlinear Damped Vibrations of a Laminated Composite Plate Subjected to Blast Load
**J06-192** Analysis Tools for Adhesively Bonded Composite Joints, Part 2: Unified Analytical Theory
**J06-257** Analytical Electroacoustic Model of a Piezoelectric Composite Circular Plate
**J06-331** Microcracking in Cross-Ply Laminates due to Biaxial and Thermal Loading
**J06-356** Two-Dimensional Analysis of Functionally Graded Beams
**J06-097** Core Crush Problem in the Manufacturing of Composite Sandwich Structures: Mechanisms and Solutions
**J06-294** Response and Control of Smart Laminates Using a Refined Hybrid Plate Model
**J06-328** Optimized Design of Piezoelectric Flap Actuators for Active Flow Control
**J06-330** Static and Dynamic Delamination of Foam Core Sandwich Members
**J06-074** Shell Buckling Design Criteria Based on Manufacturing Imperfection Signatures
**J06-018** Analysis Tools for Adhesively Bonded Composite Joints, Part 1: Higher-Order Theory
**J06-119** Dynamic Buckling of Functionally Graded Spherical Caps

### *Structural Design*

**J06-148** Analysis of Inflated Conical Cantilever Beams in Bending
**J06-255** Parameter Optimization of the Dynamic Behavior of Inhomogeneous Multifunctional Power Structures
**J06-145** Fast Meshless Reanalysis Using Combined Approximations, Preconditioned Conjugate Gradient, and Taylor Series
**J06-244** Shear Buckling of Flat Orhotropic Stiffened Panels with Application to Glare Material
**J06-016** Experimental Investigation of Tape Springs Folded in Three Dimensions
**J06-356** Two-Dimensional Analysis of Functionally Graded Beams
**J06-151** Torsion of a Functionally Graded Cylinder
**J06-192** Analysis Tools for Adhesively Bonded Composite Joints, Part 2: Unified Analytical Theory
**J06-147** Crushing of a Textile Core Sandwich Panel
**J06-304** Stacking Sequence Design of Flat Composite Panel for Flutter and Thermal Buckling
**J06-308** Nonlinear Dynamic Sensitivities of Structures Using Combined Approximations

**J06-074** Shell Buckling Design Criteria Based on Manufacturing Imperfection Signatures
**J06-018** Analysis Tools for Adhesively Bonded Composite Joints, Part 1: Higher-Order Theory
**J06-040** Increasing Allowable Flight Loads by Improved Structural Modeling

### *Structural Durability (Including Fatigue, Fracture, and Environmental Degradation)*

**J06-237** Crack Tip Fields in Functionally Graded Materials with Temperature-Dependent Properties
**J06-344** Low Velocity Impact Response of Small-Angle Laminated Composites
**J06-221** Parametric Two-Dimensional Finite Element Investigation: Shot Peening of High-Strength Steel
**J06-059** Adaptive Optimal Sampling Methodology for Reliability Prediction of Series Systems
**J06-314** Detection of Corrosion Using Piezoelectric Impedance-Based Structural Health Monitoring
**J06-043** Fatigue Crack Growth Prediction Under Spectrum Load Using Crack Driving Force Delta K
**J06-101** Damage Index Estimation in Beams and Plates Using Laser Vibrometry
**J06-330** Static and Dynamic Delamination of Foam Core Sandwich Members

### *Structural Dynamics and Characterization*

**J06-204** Combined Direct/Adjoint Reduced-Order Approximations for Design-Oriented Structural-Acoustics
**J06-266** Structured Pseudospectra and Random Eigenvalues Problems in Vibrating Systems
**J06-164** Vibration and Large Deflection of Cantilevered Elastica Compressed by Angled Cable
**J06-267** Free Vibration of Transversely Isotropic Circular Plates
**J06-188** Approximate Spectral Element for Wave Propagation Analysis in Inhomogenous Layered Media
**J06-228** Nonlinear Response of Highly Flexible Structures to Air Blast Loads: Application Shelters
**J06-032** Transcendental Inverse Eigenvalue Problem Associated with Longitudinal Vibrations in Rods
**J06-200** Calculation of Eigensolution Derivatives for Nonviscously Damped Systems
**J06-283** Cracking-Induced Mistuning in Bladed Disks
**J06-161** Novel Approach to Self-Sensing Actuation for Semi-Active Vibration Suppression
**J06-238** Efficient Modal Frequency Response Analysis of Large Structures with Structural Damping
**J06-332** Complex Variable Method for Eigensolution Sensitivity Analysis
**J06-041** Aeroelastic Response of Composite Aircraft Swept Wings Impacted by a Laser Beam
**J06-197** Nonlinear Reduced Order Random Response Analysis of Structures with Shallow Curvature
**J06-119** Dynamic Buckling of Functionally Graded Spherical Caps
**J06-149** Structural Dynamic Considerations for a Hydrocode Analysis of Hypervelocity Test Sled Impacts
**J06-343** Matrix Formulation for Minimum Response of Undamped Structure
**J06-061** Modeling and Application of Eddy Current Damper for Suppression of Membrane Vibrations
**J06-101** Damage Index Estimation in Beams and Plates Using Laser Vibrometry
**J06-085** Hilbert–Huang Transform Stability Spectral Analysis Applied to Flutter Flight Test Data

### *Structural Finite Elements*

**J06-297** Topology Optimization for an Evolutionary Design of a Thermal Protection System
**J06-174** Semi-Active Vibration Control of Adaptive Structures Using Magnetorheological Dampers
**J06-167** Three-Dimensional Analysis of Wrinkled Membranes Using Modification Scheme of Stress-Strain Tensor
**J06-209** Efficient Successive Reanalysis Technique for Engineering Structures
**J06-164** Vibration and Large Deflection of Cantilevered Elastica Compressed by Angled Cable
**J06-158** Parallel Implementation of Structural Dynamic Analysis for Parachute Simulation
**J06-197** Nonlinear Reduced Order Random Response Analysis of Structures with Shallow Curvature
**J06-228** Nonlinear Response of Highly Flexible Structures to Air Blast Loads: Application Shelters
**J06-327** Extensive Experiments on Genetic Algorithms for the Optimization of Piezoelectric Actuator Locations
**J06-144** Elastodynamic Analysis of Aerial Refueling Hose Using Curved Beam Element
**J06-145** Fast Meshless Reanalysis Using Combined Approximations, Preconditioned Conjugate Gradient, and Taylor Series
**J06-294** Response and Control of Smart Laminates Using a Refined Hybrid Plate Model
**J06-331** Microcracking in Cross-Ply Laminates due to Biaxial and Thermal Loading
**J06-183** Neural Networks for Inverse Problems Using Principal Component Analysis and Orthogonal Arrays

### *Structural Modeling*

**J06-284** Multiple Delamination Detection of a Composite Beam Using Magnetostrictive Patch
**J06-258** Stochastic Nonparametric Models of Uncertain Hysteretic Oscillators
**J06-266** Structured Pseudospectra and Random Eigenvalues Problems in Vibrating Systems
**J06-267** Free Vibration of Transversely Isotropic Circular Plates
**J06-188** Approximate Spectral Element for Wave Propagation Analysis in Inhomogenous Layered Media
**J06-167** Three-Dimensional Analysis of Wrinkled Membranes Using Modification Scheme of Stress-Strain Tensor
**J06-156** Analysis of Edge Effect in Large Deflections of Rotationally Symmetric Membrane Caps
**J06-016** Experimental Investigation of Tape Springs Folded in Three Dimensions
**J06-017** Electromechanically Coupled Zigzag Third-Order Theory for Thermally Loaded Hybrid Piezoelectric Plates
**J06-192** Analysis Tools for Adhesively Bonded Composite Joints, Part 2: Unified Analytical Theory
**J06-257** Analytical Electroacoustic Model of a Piezoelectric Composite Circular Plate
**J06-221** Parametric Two-Dimensional Finite Element Investigation: Shot Peening of High-Strength Steel
**J06-330** Static and Dynamic Delamination of Foam Core Sandwich Members
**J06-356** Two-Dimensional Analysis of Functionally Graded Beams
**J06-160** Stability in a Twisted Periodic Blade System with Cracks
**J06-147** Crushing of a Textile Core Sandwich Panel
**J06-149** Structural Dynamic Considerations for a Hydrocode Analysis of Hypervelocity Test Sled Impacts
**J06-294** Response and Control of Smart Laminates Using a Refined Hybrid Plate Model
**J06-146** Interative Computation of Modal Sensitivities
**J06-187** Flutter/Limit Cycle Oscillation Analysis and Experiment for Wing-Store Model
**J06-018** Analysis Tools for Adhesively Bonded Composite Joints, Part 1: Higher-Order Theory

### *Structural Optimization*

**J06-297** Topology Optimization for an Evolutionary Design of a Thermal Protection System
**J06-209** Efficient Successive Reanalysis Technique for Engineering Structures
**J06-348** Design of Postbuckled Spinal Structures for Airfoil Camber and Shape Control
**J06-335** Sensitivity Analysis and Optimal Design of Smart Peizolaminated Composite Beams
**J06-123** Efficient Shape Optimization Under Uncertainty Using Polynomial Chaos Expansions and Local Sensitivities
**J06-218** Aeroelastic Optimization of a Helicopter Rotor Using Orthogonal Array-Based Metamodels
**J06-200** Calculation of Eigensolution Derivatives for Nonviscously Damped Systems
**J06-019** Robust Design: An Overview

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